

## CLAIMS:

1. A high-pressure discharge lamp with a reflector and a cooling device, characterized in that the cooling device comprises at least one pair of nozzles (7) which guide a cooling gas flow (8) onto the electrode lead-throughs (6) of the discharge tube (3).
2. A discharge lamp as claimed in claim 1, characterized in that the pair of nozzles comprises two nozzles (7) which are passed through the reflector (2) at a mutual distance of less than 2 cm.
- 5 3. A discharge lamp as claimed in claim 1, characterized in that one or several nozzles (7) are arranged in front of the reflector (2).
4. A discharge lamp as claimed in claim 1, characterized in that one or several  
10 nozzles (7) are arranged in the reflector neck.
5. A discharge lamp as claimed in claim 1, characterized in that the discharge tube (3) is surrounded by two sleeve sections (9) into which cooling gas flows (8) can be introduced from mutually opposed directions.
- 15 6. A discharge lamp as claimed in claim 5, characterized in that the sleeve sections (9) have a diameter which is 0.5 to 4 mm greater than that of the discharge tube in the regions of the electrode lead-throughs (6).
- 20 7. A discharge lamp as claimed in any one of the claims 1 to 6, characterized in that the cooling power is controlled by a control unit so as to observe given operational parameters.
8. A discharge lamp as claimed in any one of the claims 1 to 7, characterized in  
25 that the nozzles have a diameter of approximately 0.5 to 2 mm.

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9. A discharge lamp as claimed in any one of the claims 1 to 8, characterized in that it is connected to a gas pressure source capable of generating a gas pressure of several hundreds of mbar in the nozzles.

5 10. A projection system with a high-pressure discharge lamp as claimed in any one of the claims 1 to 9.